

Application No. 10/039,106
Amendment dated January 2, 2004
Reply to Election/Restriction of December 12, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A system comprising:
a bus having at least two end points;
first and second sets of devices each containing a quantity of devices from 0 to N, wherein N is any integer greater than 0, and wherein said first and second sets of devices are connected to said bus;
a controller coupled to said bus, configured to discover whether to terminate said bus at one of said end points relative to said first and second sets of devices, dependent upon whether said controller receives a reply message in response to a test message sent to said first and second sets of devices.

2. (Original) The system as recited in Claim 1, wherein said controller is configured to terminate one end of said bus opposite said first set of devices, if said controller receives a reply message from said first set of devices, but does not receive a reply message from said second set of devices.

3. (Original) The system as recited in Claim 1, wherein said controller is configured to terminate one end of said bus opposite said second set of devices, if said controller receives a reply message from said second set of devices, but does not receive a reply message from said first set of devices.

4. (Original) The system as recited in Claim 1, wherein said controller is further configured not to terminate either end of said bus, if said controller receives reply messages from said first and second set devices.

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5. (Original) The system as recited in Claim 1, wherein said controller is configured to (i) deactivate said second set of devices and (ii) enable said first set of devices, when sending a test message to said first set of devices.

6. (Original) The system as recited in Claim 1, wherein said controller is configured to (i) keep enabled said first set of devices and (ii) enable said second set of devices, when sending a test message to said second set of devices.

7. (Original) The system as recited in Claim 1, wherein said bus is a CAN bus and said controller is a paper handling controller for a printing device.

8. (Original) A method of terminating a bus comprising:
activating a termination load across a controller device;
enabling a first set of potential devices connected to said bus;
attempting to establish communication with any of said first set of potential devices;
deactivating said termination load across said controller device, if communication is established between said controller and at least one of said potential devices in said first set of potential devices;
enabling a second set of potential devices connected to said bus;
attempting to establish communication with any of said second set of potential devices; and
reactivating said termination load across said controller device, if communication is not established between said controller and at least one of said potential devices in said second set of devices.

9. (Original) The method as recited in Claim 8, further comprising: leaving enabled said first set of potential devices while attempting to establish communication with any of said second set of potential devices.

10. (Original) The method as recited in Claim 8, wherein said termination load is a resistor coupled in parallel to said controller and is activated and deactivated by a switch controlled by said controller.

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if
11. (Original) The method as recited in Claim 8, wherein said bus is a CAN bus.

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12. (Original) The method as recited in Claim 8, wherein said controller is a paper handling controller for a printer device.

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13. (Original) The method as recited in Claim 8, wherein said first set of potential devices includes at least one paper handling device.

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14. (Original) The method as recited in Claim 8, wherein said second set of potential devices includes at least one paper handling device.

15.
15. (Original) A method of terminating a CAN bus, comprising:
enabling a first branch of said CAN bus;
establishing a controller as a termination point on said CAN bus by connecting a termination resistor in parallel with said controller;
determining whether there is a device, other than said controller connected to said first branch, by sending a first communication message on said CAN bus and awaiting a reply message;
if a reply message is received, disconnecting said termination resistor from said controller, thereby removing said controller as said termination point on said first branch;
leaving enabled said first branch of said CAN bus;
enabling a second branch of said CAN bus;
determining whether there is a device, other than said controller connected to said second branch, by sending a second communication message on said CAN bus and awaiting a reply message;
if no reply message is received in response to said second communication message, re-establishing said controller as said termination point on said CAN bus by reconnecting said termination resistor in parallel with said controller.

16. (Original) The method as recited in Claim 15, wherein said resistor is connected and disconnected by a switch managed by said controller.

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~~17.~~ (Original) The method as recited in Claim 15, wherein said controller is a paper handling controller.

~~18.~~ (Original) The method as recited in Claim 15, wherein said first branch is a portion of said CAN bus with at least one paper handling device coupled thereto.

~~19.~~ (Original) The method as recited in Claim 15, wherein said second branch is a portion of said CAN bus with at least one paper handling device coupled thereto.

~~20.~~ (Original) The method as recited in Claim 15, further comprising maintaining said controller as a termination point on said CAN bus if no reply message is received in response to said first communication message.